

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for inspecting an insulating layer deposited or planarized on a substrate in fabrication processes of semiconductor with a library of optic images, the method comprising ~~the steps of:~~

collecting standard data for thickness of the insulating layer;

collecting standard data for an optic image of the insulating layer;

making a library by matching standard data for the thickness and the optic image collected on a same location on the substrate; and

inspecting the insulating layer with the library.

2. (Original) The method as defined by claim 1, wherein the standard data for the thickness is data for a particular region or the whole of the wafer.

3. (Original) The method as defined by claim 1, wherein the standard data for the optic image is data for a particular region or the whole of the wafer.

4. (Original) The method as defined by claim 1, wherein the optic image is stored in analog or digital image.

5. (Currently Amended) The method as defined by claim 1, wherein ~~the step of making a library is characterized in that~~ includes making a library such that each optic image for the region represented by each thickness data is determined and a continuous image library for each thickness is constructed.

6. (New) A method for inspecting an insulating layer deposited or planarized on a substrate in fabrication processes of semiconductor with a library of optic images, the method comprising:

collecting thickness data of the insulating layer at a plurality of locations on the substrate;

collecting optic image data of the insulating layer for said plurality of locations on the substrate;
correlating the optic image data to the thickness data for each of said plurality of locations;
creating a library by matching the optic image data to the thickness data for each of said plurality of locations; and
inspecting the insulating layer for each of said locations with the library.